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LOMA LINDA UNIVERSITY
School of Behavioral Health
in conjunction with the
Faculty of Graduate Studies

A Cultural Study of Attributions of Sports Fans

by

John C. Park

A Thesis submitted in partial satisfaction of
the requirements for the degree
Doctor of Philosophy in Clinical Psychology

December 2012

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Each person whose signature appears below certifies that this thesis in his/her opinion is adequate, in scope and quality, as a thesis for the degree Doctor of Philosophy.

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ABBREVIATIONS

FI	Fan Identification
INT	Internal
EXT	External
IND	Individualism
COL	Collectivism
SSIS	Sports Spectator Identification Scale
CDS	Causal Dimension Scale
I/C	Individualism/Collectivism
LSU	La Sierra University
LLU	Loma Linda University
PI	Pacific Islander
EM	Expectation Maximization

ABSTRACT OF THE THESIS

A Cultural Study of Attributions of Sports Fans

by

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Loma Linda University, October 2012

Dr. Kendal Boyd, Chairperson

Cultural differences in the attributions of sports fans in the US have not been sufficiently explored. Studies have shown that individualists have the tendency to make more internal attributions compared to collectivists (Kashima & Triandis, 1986; Al-Zahrani & Kaplowitz, 1993; Cha & Nam, 1985; Hallahan et al., 1997). Furthermore, in sports setting, individualists have the tendency to engage in the self-serving bias, whereas collectivists may not engage in this process (Schuster et al, 1989; Lee et. al, 1996; Hallahan et. al, 1997; Crittendon, 1991). Undergraduate students at La Sierra University, California, participated in an experiment where cultural differences in fans' attributions were examined. Three hypotheses were developed. First, it was hypothesized that highly identified fans will make more attributions than low identified fans. Second, collectivism will be positively related to external attributions in each win and loss situation as the self-serving bias will not be seen. The interaction of collectivism and fan identification (FI) will also be positively related to external attributions in each win and loss situations after controlling for age, gender, and ethnicity. Third, individualism will be positively related with external attributions in loss situations and will be positively related with internal attributions in win situations confirming the self-serving bias. After controlling for age, gender, and ethnicity, the interaction of individualism and FI will also be positively

related with external attributions in loss situations, and positively related with internal attributions in win situations enhancing the self-serving attribution bias. The instruments used in this study are as follows: The Sports Spectatorship Identification Scale (SSIS), The Individualism and Collectivism Scale (I/C Scale), and the Revised Causal Dimension Scale II for Sports Fans (RCDS-II). Correlations and hierarchical regressions were used to test the hypotheses. Inconclusive results were found regarding cultural differences, but significant findings were found for attributions. The interaction of collectivism and fan identification was negatively associated with internal attributions across wins ($p < .05$). Age was negatively related with internal attributions across wins ($p < .05$). Asian Americans had lower levels of internal attributions across wins ($p < .01$). Suggestions are made for future research.

CHAPTER ONE

INTRODUCTION

Sports and sporting events are tremendous marketing industry that generates billions of dollars in which millions of fans follow their favorite sports teams and athletes (Ozanian, 2005; Levin & McDonald, 2009). Sports fans identify at different levels with sports teams leading to various reactions such as celebration to a win or dejection to a loss (Zillman et al., 1989; Branscombe & Wann, 1994; Wann & Branscombe, 1993; Wann & Dolan, 1994). Furthermore, the way fans attribute their team's success and failure may reflect their cultural orientation. Individualistic fans are prone to make more internal attributions about their team when compared to fans that are collectivists (Al-Zahrani & Kaplowitz, 1993; Gau & Kim, 2011). Collectivistic fans are prone to making more external attributions about their team when compared to individualistic fans (Al-Zahrani & Kaplowitz, 1993; Gau & Kim, 2011). The role of culture and the causal attributions of sports fans will be the focus of the present investigation.

Social Identity Theory

It has been shown that self-esteem is derived from group membership (Heider, 1958; Tajfel & Turner, 1986; Russell, 1993; Wright & Forsythe, 1997; Ellemers et al., 1997; Wann et al., 2006). People have the tendency to make favorable, self-serving comparisons between their own group (in-group) and another group (out-group). The self-serving bias occurs in which these judgments about the in-group protect or enhance one's self esteem (Brewer, 1979; Lau, 1984; Ellemers et al., 1997). It has been suggested, although not always observed, that in-group identification may be a good

predictor of the self-serving bias to favor the in-group over the out-group (Wann et al., 2005). In the present context, it may be assumed that people are motivated to remember the favorable information about their group rather than the unfavorable ones (Kashima & Triandis, 1986; Grove et al., 1991). Thus, this leads to a person defining his or her “positive distinctiveness” based on the group rather than on the individual. These are the key regulation processes used by individuals to maintain one’s identity and self-esteem.

Culture

A common, accepted definition of culture does not exist. Triandis simply puts it as a social phenomenon that is described as “what has worked in the experience of a society, so that it was worth transmitting to future generations” (Triandis, 2011). Culture entails shared standard procedures, unstated and agreed assumptions, meanings, practices, tools, myths, norms, values, and habits about society and environment (Bond, 1983; Kim et al., 1994; Markus & Kitayama, 1991; Triandis, 2011). Cultural influences the social interaction style, the perceptual organizational processes, and the cognitive appraisal style of the person (Triandis et al., 1986; Tajfel & Turner, 1986; Wright & Forsythe, 1997; Lazarus & Folkman, 1984). Individualism and collectivism are the foremost cultural orientation terms that have been identified to compare the different communication styles and social interactions across diverse cultures (Triandis et al., 1986).

Individualism

Individualism is the dominant worldview of societies in many countries of Europe

and America (Al-Zahrani & Kaplowitz, 1993; Bond, 1983; Gau & Kim, 2011) that emphasizes independence, self-reliance, and the pursuit of one's goals and desires (Markus & Kitayama, 1991; Triandis, 2011). The intrinsic value and the unique potential of the individual are valued and serve as the basic motivation of the individual to fulfill his or her potential in life. Individualists possess a set of internal attributes such as personal thoughts, preferences, motives, goals, attitudes, beliefs and abilities that uniquely define the person and directs his or her behavior which serve as the core of the self-identity of the individualist (Kim et al., 2007). Self-autonomy and independence is valued above group responsibility, which may lead to clear relational boundaries. As the right to privacy and freedom of choice are highly valued, the individualist is encouraged to express his or her needs and wants without social hindrance or restraints (Kim et al., 1994).

Collectivism

Collectivists emphasize relationships and value social harmony and interdependence (Bond, 1983; Markus et al., 1991; Gau & Kim, 2011; Markus & Kitayama, 1991; Triandis, 2011). Collectivism is prominent in Asian, Latin American, African, and many southern European countries (Bond, 1983; Triandis et al., 1986; Kim, 2007; Al-Zahrani & Kaplowitz, 1993). It is important to the collectivist to distinguish between being part of an in-group or an out-group (Kim et al., 1994). The "we" of the consciousness is emphasized which emphasizes collective welfare, harmony, and responsibilities (Kim, 2007). Interdependent relationships and group identity are the key components in developing one's personal identity for the collectivists (Singelis et al.,

1995). Thus, the personal goals of the collectivists often overlap with the goals of the group they identify with (Markus et al., 1991). Moreover, social behavior is best predicted from the norms, duties, and obligations of the interdependent relationships (Singelis et al., 1995). Values such as reciprocity, belonging, kinship, hierarchy, loyalty, honor, respect, and social obligation are stressed in collectivistic communities (Kim & Sherman, 2007). In light of these values, collectivists face the prominent need to succeed because it also impacts the family or others who are in relationship with the person. Failure, or the inability to succeed, will bring about much distress not only to the person, but also to the people whom the person has connections to. Collectivism also entails the person recognizing that his or her behavior is determined by what the person perceives to be the thoughts, feelings, and actions of others in the group (Markus et al., 1991). Collectivists are motivated to find ways to conform in their social group and to become part of interpersonal relationships (Markus et al., 1991; Triandis, 2011).

It is commonly understood that individualism and collectivism are polar views of cultural orientation. There exists the belief that if a person is collectivist, that person cannot be individualistic. However, Triandis (1993) notes that individualism is its own, unique perspective separate from collectivism. The traditional view of a one-dimensional cultural orientation with individualism and collectivism being polar opposites of the one continuum may be outdated and inaccurate. Triandis (1998) suggests different dimensions of individualism and collectivism. Thus, Triandis suggests that a person may be able to identify with various levels of individualism and collectivism. It is suggested that individualism and collectivism should be seen as separate dimensions, and not one continuum.

Sports and Competition

In sports, competition is simply defined as “the drive to win, or defeat one’s opponents” (Kilduff et al., 2010). The annual revenues for 2003 of the four major North American sports leagues in the US and Canada (Major League Baseball, National Football League, National Basketball Association, and the National Hockey League) exceeded 47 billion dollars (Ozanian, 2004; Ozanian, 2005; Levin & McDonald, 2009). In their research, Levin and McDonald (2009) have shown that with an increase in competitive balance in sports, there is an increase in fan interest and attendance in the games. Increased competition strengthens the uncertainty of the outcome, which leads to an increase in the entertainment value for the sport fans. Moreover, increased competition leads to increased revenue through the financial investment of the sports fans, which is seen in ticket sales, memorabilia, team apparel, and clothes. Competition is a powerful psychological phenomenon that leads to significant behavioral and physiological consequences for the fans. Research indicates that sport fans experience similar physiological responses and reactions as similar to the athletes who are engaged in competition such as experiencing negative emotions such as anxiety and/or depression (Wann, Schrader, & Adamson, 1998), aggressive behavior (Wann, Carlson, & Schrader, 1999), and negative psychological health (Wann et al., 1999; Neil et al., 2011).

Fan Identification

Fan identification (FI) is a social phenomenon where individuals identify and become part of their team’s performance (Mann, 1974; Wann et al., 1993; Gau & Kim, 2011). FI is also referred as the level of fan loyalty to the team (Russell, 1993; Wann et

al., 1993). This is the process where the fan identifies with the attributes of the team: the location, the success, the players, and other team/athlete characteristics (Wann et al., 1993; Hyatt, 2007). For example, a fan of the Chicago Cubs baseball team will conform to the norms and values of belonging to that team (i.e., wearing a Cubs hat, watching Cubs games, and following the team's players and statistics) and identify and/or socialize with other Chicago Cubs fans. This process may influence how the fan perceives the team, and shape how they interact with other fans, including opposing fans (Wann et al., 2001). Thus, sport fans are individuals who have a genuine interest in following a sport, team, or athlete (Wann et al., 1994). Furthermore, according to the social identity theory, fans make favorable comparisons with other teams to increase self-esteem (Mann, 1974; Mark et al., 1984; Grove et al., 1991; Lau & Russell, 1980; Wann et al., 1994; Wann & Grieve, 2005). For example, even though the Chicago Cubs baseball team may have a losing record, fans may still voice their team pride by focusing on the positive aspects of their team, such as the rich tradition, the unique personalities of the athletes, and past successes and/or achievements of the team. Thus, fans make biased or self-serving attributions to preserve and enhance the self-esteem and identity of their team (Wann et al., 1994).

Wann (1994) notes the different levels of FI. When their team performs poorly or loses a game, fans with low team identification experience only a minor consequence on their self-concept and do not engage deeply in the loss. Their reactions tend to mild when compared to the highly identified fans. However, fans with a high level of identification experience a strong connection with their team, and thus, their reaction to their team's loss will exhibit more investment and a stronger reaction. Highly identified

fans may display strong affect such as anger, experience great distress, sadness, or other negative emotions. More specifically, they may exhibit higher levels of aggressive behavior and stronger emotional response (Wann & Dolan, 1994; Branscombe & Wann, 1994). These physiological responses and reactions may be because highly identified fans may have a significant level of investment in their team and not have the resources to deal with the demands encountered in the environment that involves competition (Neil et al., 2011; Lazarus & Folkman, 1984). Moreover, according to Tajfel (1981), the team is a reflection of who they are, and the success and/or failures of the team become an extension of the individual. According to Hyatt (2007), some sports fans may identify with the team at high levels that the teams' loss in some circumstances would be like experiencing a death or a divorce. This may help to explain the different degree of sports fan behaviors that are seen in sporting events.

It has also been shown that compared to low identified fans, highly identified fans are more likely to try to influence the outcome of the game (Wann et al. 1994), experience greater levels of anxiety and arousal when watching the competitive event (Branscombe & Wann, 1992), and possess a greater knowledge of the team and sport (Wann & Branscombe, 1995). Research also indicates that identification with sports teams is positively related to social psychological health (Wann et al., 2006). Fans experience higher levels of social self-esteem, social well-being, personal self-esteem, vigor, positive emotions, openness, conscientiousness, and extroversion. Fans may also experience lower levels of loneliness, depression, alienation, negative emotions, fatigue, anger, tension, and confusion. These results have been confirmed in different settings and cross-cultural samples (Wann, 2006). It is important to note that high FI can have

increased negative effects as well (Wann, 2001). It can facilitate spectator violence, aggression, hostility, sport addictions, and other violent and abusive actions.

Furthermore, fans that highly identify with their team may attempt use coping strategies to deal with their team's defeat. The team's defeat, according to the social identity theory, is seen as a threat to the fan's identity, and to deal with it, he or she may react and respond with behaviors and thoughts that alleviate such threats (Wann & Grieve, 2005).

Disposition Theory of Sport Spectatorship

The disposition theory of sport spectatorship developed by Zillman, Bryant, and Sapolsky (1989), states that a fan will enjoy watching his or her team succeed and enjoy watching the rival team fail. Team success and rival team failure are highly celebrated and enjoyed, while team failure and rival team success are disliked. As the teams intensify in competition, the magnitude of positive reactions increases when watching the team succeed or when the rival team fails. Because there are stronger emotions associated with high FI compared to low FI, these individuals tend to be biased in how they analyze their team and the rival team (Wann, 2001). As such, fans internalize team successes and externalize the team's failures. Fans are often positively biased in the evaluation of the team's past and future performances. For example, more of the team's success and achievements would be remembered compared to the defeats or failures. For the average fan, the highest level of enjoyment should occur when his or her team defeats the rival team. Furthermore, the theory postulates that a fan's disposition toward the favorite team and the rival team will impact the intensity of response felt immediately after the sport event (Wann, 2003).

Attribution Theory

Attribution theory explains how people attribute the behavior of themselves or others (Heider, 1958; Weiner, 1986; Wong & Weiner, 1981; Mark et al., 1984; Russell, 1982). Heider (1958) specifies upon two main attributions: internal and external attributions. External attributions explain the cause to an outside factor that is not the responsibility of the person. Internal attributions explain the cause to factors within the person placing responsibility on the individual. Studies have shown that people have the tendency to make internal attributions for their personal success and make external attributions for their failures (Heider, 1958; Grove et al., 1991).

Weiner (1986) expands upon Heider's work in proposing the Attribution Theory of Motivation. According to Weiner, attributions are made to provide explanation, justification, and reasons that provide motivation for the individual to behave in a certain manner. The main attributions can be categorized within three dimensions. One of the dimensions, locus of control, emphasizes whether the control of responsibility is external or internal. For instance, when a sports fan's team wins, the fan will attribute the team win to the talent, effort, and ability of the team which in turn leads to the enhancement of one's self esteem. When one fails or loses, the fan will likely use external attribution, attributing causes to situational factors rather than blaming ourselves which, in turn, protects one's self esteem.

Fundamental Attribution Error

The fundamental attribution error, also known as the correspondence bias, is seen when people make attributions of other people's behaviors (Ross, 1977). It describes the

tendency to emphasize internal (or dispositional) factors for the behaviors of others and under-emphasize the external (or situational) factors. The following hypotheses have been posited as acceptable models for explaining the fundamental attribution error. First, the just-world phenomenon provides the moral basis for making attributions and states that people generally get what they deserve (Lerner, 1977). By attributing failures to dispositional or internal causes rather than situational or external causes, it supports the belief that the world is just, and provides a sense of control in our lives. Second, the salience of the actor theory explains how people have the tendency to attribute the observed act or behavior to the primary actor of the behavior (Smith & Miller, 1979). Thus, the attributions made for the particular behavior emphasizes the internal factors of the primary actor, and generally does not account for the external factors.

Self-Serving Bias

The self-serving bias, also known as the self-serving attribution bias, is derived from the fundamental attribution error, and is rooted in the individual boosting one's self esteem and protecting one's identity (Miller & Ross, 1975; Kashima & Triandis, 1986; Grove et al., 1991). This bias explains how individuals have the tendency to attribute their successes to internal or personal factors, and attribute failures to external or situational factors. It serves to provide the individual with a cognitive coping mechanism to deal effectively with the different events of one's life. Moreover, Wong and Weiner (1981) note that there is a greater tendency to search for attributions in situations of failures and unexpected situations than situations of success and expectancy.

Cultural Variations in Attributions

Studies have shown variations in the attribution process in individualistic and collectivistic societies. Western, individualistic societies have the general tendency to make more internal attributions across success and failure outcomes compared to non-western, collectivistic societies because individualists are more likely to enhance and protect one's self-esteem (Kashima & Triandis, 1986; Al-Zahrani & Kaplowitz, 1993; Cha & Nam, 1985; Hallahan et al., 1997). In contrast, collectivistic societies have demonstrated the likelihood to make more external attributions across success and failure outcomes compared to individualistic societies as their goals are related to interdependent values (Kashima & Triandis, 1986; Al-Zahrani & Kaplowitz, 1993; Cha & Nam, 1985; Hallahan et al., 1997). The self-serving bias is expressed differently in the diverse cultural orientations as well (Kashima & Triandis, 1986; Lee et al, 1996). Markus and Kitiyama state the ways we perceive our self-identity affects how this attribution process. Moreover, they showed that in individualistic cultures, the self is viewed as being independent from the social context, and thus are more likely to demonstrate the self-serving bias. In collectivistic cultures, the self is understood in relation to social relationships and roles in society, and collectivists are less likely to demonstrate the self-serving bias than individualists.

Sports and Attributions

Sports fans make attributions to explain the performance and outcome of their team. The attributions of sports fans were originally investigated by Mann (1974), who their reactions following the outcome of their team. He noted that fans of the losing team

attributed the team's failure to external factors such as poor officiating or luck rather than internal factors such as the team's effort or talent. Moreover, FI plays a major role in the attribution process of the sports fans. Sports fans that are highly identified with their team will experience the team's defeat as though it was a personal defeat and will elicit a strong reaction in the person who belongs to such group (Miller & Ross, 1975; Sloan, 1979; Russell, 1993; Wann & Dolan, 1994). Highly identified fans are also likely to make positive attributions about his or her team regardless of the outcome or performance of their team in order to preserve one's self esteem and protect one's identity (Brewer, 1979; Lau et al., 1980; Wann et al., 1994).

The Self-Serving Bias in Sports Fans

Many studies highlight the presence of the self-serving bias where fans have the tendency to internalize success while externalizing failures (Miller & Ross, 1975; Lau, 1984; Grove et al., 1991; Wann et al., 1994). It has also been noted that the self-serving bias has been inconsistent in social research (Wann & Dolan, 1994). Wann and Dolan note that social environment, circumstance, and the competitive nature of the sporting event may alter the attribution process. Sports fans may be obliged to adjust their attributions in order to maintain social conformity. Furthermore, the fans' socialization process, group norms and beliefs of the game, and media influence has also been noted as factors to bias one's perception of the sporting event (Wann & Dolan, 1994; Gau & Kim, 2011).

Furthermore, cultural orientation may play a role in the communication and the cognitive processing of the sport fans (Wann & Dolan, 1994; Gau & Kim, 2011). As

previously mentioned, collectivists tend to make more external attributions, and individualists tend to make more internal attributions. This phenomenon is also representative in the sports settings (Schuster et. al, 1989; Lee et. al, 1996; Hallahan et. al, 1997; Crittendon, 1991). Moreover, these attribution patterns have been consistent in collectivistic and individualistic cultures across different sports settings, social situations, and countries (e.g., United States, England, India, Taiwan, China, Middle East, and Korea). Unique findings have been found in a cross-cultural comparison among the subjects in Germany and Hong Kong (Si et. al, 1995). The authors found that Chinese participants perceived the causes of success and failure in sports as more internal and controllable than the German participants. They explain the results in light of the Chinese, traditional culture. The Chinese person tends to attribute failures to internal causes as a motivator for achievement and to maintain group cohesion. The tendency for Chinese subjects to make internal attributions following success is not a self-enhancement process, but rather it is used to affirm the cooperative process in striving towards a collective goal. Thus, the unique attribution process of Chinese subjects reflects the cultural values of achievement motivation for the collective group.

Additional Factors on Attribution Process

Research has shown there are many factors that influence the attribution process. Bond (1983) notes that individuals alter their attributions in the presence of other people based on the interpersonal norms of his or her culture. For example, he notes that Asians (who identify with collectivism), in the social context, make attributions to appear modest on the dimensions of effort and ability. Moreover, studies have also shown that one's

emotional state and level of self-esteem can influence the attribution process (Greenberg et al., 1992). The authors also note that people who experience depression are likely to make higher levels of internal attributions for negative outcomes than people who are not depressed. Motivation may influence the self-serving bias out of the need to enhance and preserve one's identity (Shepperd et al., 2008). Personality has also shown to influence the attribution style (Twenge et al., 2004; Wichman & Ball, 1983). Individuals with high levels of internal locus of control are more likely to exhibit the self-serving bias than those who have higher levels of external locus of control. Furthermore, it has also been noted that the experimental studies may not accurately reflect how people make attributions in natural, real life settings (Lau & Russell, 1980; Weiner, 1985). The extensive research on attributions has shown that many variables affect the attribution process.

Hypotheses

The hypotheses of this study are based on how FI and cultural orientation affects the attribution process of sports fans. Studies have confirmed that FI plays a role in the attribution process of fans. Moreover, cultural orientation has been shown to play a role in how fans may engage in the self-serving bias. This study seeks to expand on the previous research by examining if FI and cultural orientation plays a role in the self-serving bias of fans. The following hypotheses were developed for the present study.

Fan Identification

1. Fan identification will be positively related to attributions for the outcomes of

wins and losses. It is hypothesized that highly identified fans will make more attributions than low identified fans for win and loss outcomes. Furthermore, highly identified fans will exhibit the self-serving bias by making more internal attributions.

Collectivism

- 2a. Collectivism will be positively related to external attributions in each win and loss situation as the self serving bias will not be seen. It is hypothesized that collectivists will demonstrate higher levels of external attributions than individualists in each win and loss situation.
- 2b. The interaction of collectivism and FI will also be positively related to external attributions in each win and loss situation after controlling for age, gender, and ethnicity. It is hypothesized that fans that identify with high levels of collectivism and FI will demonstrate higher levels of external attributions than fans that identify with lower levels of collectivism and FI.

Individualism

- 3a. Individualism will be positively related with external attributions in loss situations and
will be positively related with internal attributions in win situations.
Individualists will demonstrate the self-serving bias by making more external attributions after a loss and more internal attributions after a win.

3b. After controlling for age, gender, and ethnicity, the interaction of individualism and fan

identification will also be positively related with external attributions in loss situations, and positively related with internal attributions in win situations enhancing the self-serving bias. Fans that identify with higher levels of individualism and FI will make more internal attributions than fans that have lower levels of individualism and FI.

CHAPTER TWO

METHOD

Participants

Participants were recruited in the department of psychology at La Sierra University (LSU), a small liberal arts and religiously affiliated university in southern California. Advertisements were developed using flyers that were posted on the bulletin board of the psychology department. Sixty LSU students participated in this study. Table 1 provides the comprehensive demographic statistics of the participants, which include age, gender, race/ethnicity, birthplace, and education level. Table 2 provides the reliability analysis and scale statistics for the instruments used in this study.

Table 1.

Demographic Information for Study Participants (N = 60).

	N	%	Mean	SD	Range
Age	60	100.0	21.3	6.7	18-46
Gender					
Male	23	38.3			
Female	36	60.0			
Missing	1	1.7			
Race/Ethnicity					
White/Caucasian	13	21.7			
Latino/Hispanic	17	28.3			
Black/African American	8	13.3			
Asian/Asian American/PI	16	26.7			
Other	5	8.3			
Missing	1	1.7			
Birthplace					
USA	48	80.0			
Other Country of Origin	12	20.0			
Education					
Completed High School	9	15.0			
Some College	49	81.7			
Completed College	1	1.7			
Higher Education	1	1.7			
Outcome					
Win	42	70.0			
Loss	18	30.0			

Note. PI = Pacific Islander. Other = Racial/ethnic background not represented by given choices. All participants of the study were enrolled in college.

Instruments

An online questionnaire was composed to measure sports FI, cultural orientation, and the attribution process of the fan (See Appendix). The instrument was composed of the following sections: demographic information, The Sports Spectatorship Identification Scale (SSIS), The Individualism and Collectivism Scale (I/C Scale), and the Revised Causal Dimension Scale II for Sports Fans (RCDS-II).

Demographic Information

The participants were asked to provide general information such as age, gender, ethnicity, religion, marital status, education level, interests, citizenship, and others. The subject's identification number was required for the purposes of granting credit for their participation and completion of the online survey. Once credit was given, their identification number was de-identified to ensure anonymity.

Sport Spectatorship Identification Scale

The Sport Spectatorship Identification Scale (SSIS) by Wann & Branscombe (1993), measures the participant's level of FI with his or her sports team. Developed for the accurate assessment of FI, the SSIS is composed of seven items with response items ranging from 1 to 8. Higher scores represent greater FI, and low scores reflect low FI. The sum of the items is used to measure the overall FI that the participant has with the particular team. Scores that are less than 18 indicate low FI, while scores greater than 35 suggest high FI. Moderate FI was identified as scores ranging from 18 to 35. Wann and Branscombe (1993) note that the Cronbach's reliability coefficient was .91. All the items

significantly inter-correlated and the average item-total correlation was reported at .59 (Wann, 1993) and .61 (Bernache-Assollant et al., 2007). It was also reported that the test-retest reliability for the one year period was statistically significant, $r(49) = .60, p < .001$ (Wann, 1993). Moreover, according to the reliability analyses and factor analyses of previous studies, the SSIS scale demonstrated internal consistency and validity (Madrigal, 2003; End et al., 2003; Bernache-Assollant et al., 2007). The SSIS has been noted to have been widely used in over 100 sports related studies and has been translated in many languages (Wann, 2001).

Individualism-Collectivism Scale.

Triandis' (1993) Individualism-Collectivism Scale (I/C) measures the level of individualism and collectivism (I/C). It is composed of 32 items based on a 7-point Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). Triandis (1993) notes that the subscales of I/C were developed with the consideration of individualism and collectivism being separate and unique constructs of cultural orientation. He identifies the horizontal and vertical dimensions of individualism and collectivism. Collectivism, both horizontal and vertical dimensions, was measured using 16 of the 32 items, which assesses for group harmony, family loyalty, and interdependence with others. Horizontal and vertical individualism was measured on 16 items assessing independence, uniqueness, and self-reliance. It measured how the participants valued their individuality, personal identity, competitive nature, and self-reliance. The Cronbach's alpha reliability coefficient for the 32 items was .81. For the Individualism subscale, it was .82, and for the Collectivism subscale, it was .81 (Triandis et al., 1993).

In a study done by Singelis et al. (1995), the factor analysis showed similar internal consistency and reliability as reported by Triandis (1993).

Revised Causal Dimension Scale II for Sports Fans (RCDS-II)

Russell's Revised Causal Dimension Scale II (1982) measures the causal perceptions of locus of causality, stability, and controllability. Items were contextualized within the setting of the sporting event to measure the participants' attributions of the event of their team's success or failure. The questionnaire identifies two main causes of attributions for the sports fans in the outcome of a win or loss: internal and external control. The external, indirect, and uncontrollable factors are attributes such as stability, variability, and changeability. Thus, it reflects causes and factors that are more externally oriented, not within the control of the fan or the team, and is related to natural causes that influence the team performance. The internal, direct, and controllable factors are attributes that the sports team can control, regulate, and are inside of the team. These factors seem to be directly related to the team being able to regulate and control. For the purposes of this study, only the internal and external dimensions of controllability were used for the statistical analysis.

Table 2.

Reliability Analysis and Scale Statistics for the SSIS, Individualism and Collectivism Scale, and RCDS-II for Sports Fans.

	Cronbach's Alpha	Mean	SD	N of Items
Sports Spectator Identification Scale	.94	36.8	14.5	8
Individualism and Collectivism Scale				
Collectivism Dimension	.84	87.4	12.3	16
Individualism Dimension	.66	77.4	8.7	15
RCDS-II for Sports Fans				
External Control	.63	5.14	1.72	3
Internal Control	.75	6.64	1.45	3

Note. The original I/C Scale is composed of 16 items for both collectivism and individualism. However, because of a typographical error, item #20 was deleted from the individualism dimension. In the original RCDS-II, internal control is labeled as personal control. For the sake of dimensional congruency, it is labeled internal control for this study.

Procedures

The coordinator of the LSU Research Participant Pool was contacted to request student participation for purposes of the study. Approval was received for data collection through the Institutional Review Board of Loma Linda University (IRB # 5100030). Agreement was made through LLU as the guarantor for the LSU IRB process. In collaboration with the LSU coordinator, flyers were developed with the description of the study and request for participation. They were then posted at the LSU school bulletin board. One academic quarter (maximum of 10 weeks) was allotted for participation in

the online questionnaire over a period of 6 months. Participants, at their own initiative, completed the online survey, and were required to email the researcher upon completion of the survey in which the participant provided his or her identification number. Completion of the online survey took approximately 30 minutes. Upon receipt of the email, the researcher contacted the faculty sponsor with the list of the student identification numbers to ensure participant anonymity and the proper receipt of academic credit. The participants had the option not to complete the survey, but as a result, these participants would not receive the credit. Students were given the opportunity to receive credit in other ways. There were no time restrictions for the survey completion.

Data Analyses

All data analyses were performed using SPSS version 20.0 Statistics Program. Prior to performing the statistical analysis, data was screened for missing data and outliers. Data was tested for assumptions of linearity, normality, and homoscedasticity. The hypotheses were tested using the hierarchical regression model, and the correlation coefficients were used to examine the relationship of the variables of interest. Hierarchical regressions were performed on the study variables to test for the effects of FI, cultural orientation, and the covariates of age, gender, and ethnicity on the attribution process. Bivariate correlations among the study variables were examined in order to analyze the relationships of the variables of interest.

CHAPTER THREE

RESULTS

Preliminary Analyses

Assumptions

Data was screened prior to analysis to check for missing data and outliers. No outliers were identified in the data set. In order to account for missing data, the missing value analysis was conducted for the variables of interest using the Expectation Maximization (EM) Algorithm based on the principle of maximum likelihood (Cohen & Cohen, 2003). The EM algorithm uses the maximum likelihood parameters and the data observations to formulate the unobserved data. The data was tested for the assumptions of normality, linearity, homogeneity of variance, and homogeneity of regression for the variables of interest: FI, cultural orientation, and attributions. Skewness and kurtosis were assessed for the study variables, which were within the normal range. The analysis showed normal distribution for the following variables: FI, age, gender, ethnicity, and the external and internal attribution dimensions. The statistical methods used were normal probability plot, histograms, and the Levene's test of homogeneity. The Levene's test of equality of variance did not show significance ($p = .42$) suggesting homogeneity of variance.

Correlations

To analyze the relationship among the variables, correlation matrices (shown in Table 3) were constructed for the outcome of wins, losses, and the combined outcome of wins/losses comparing the variables of interest: FI, Collectivism, Individualism, External Control, and Internal Control. Significant positive correlation was found between individualism and FI, $r = .27, p < .05$, for the combined wins/losses outcomes. A significant negative correlation was found between external control and internal control for the wins outcome, $r = -.30, p = .05$.

Table 3

Correlation Matrices of the Scales of Interest for Both Wins/Losses, Wins, and Losses: FI, Collectivism, Individualism, External Control, and Internal Control.

	FI	Collectivism	Individualism	External Control	Internal Control
<u>Both</u>					
<u>Wins/Losses</u>					
FI	--				
Collectivism	.21	--			
Individualism	.27*	.17	--		
External Control	.13	.00	.09	--	
Internal Control	-.03	.20	.02	-.18	--
<u>Wins</u>					
FI	--				
Collectivism	.21	--			
Individualism	.26	.19	--		
External Control	.10	-.19	-.06	--	
Internal Control	-.17	.27	.07	-.30*	--
<u>Losses</u>					
FI	--				
Collectivism	.20	--			
Individualism	.27	.17	--		
External Control	.20	.33	.35	--	
Internal Control	.26	.06	-.10	.02	--

Note. *Correlation is significant at the 0.05 level (2-tailed).

Hierarchical Regression

Hierarchical regression was conducted to determine the effects of FI and cultural orientation on the attribution process of the sports fans while controlling for age, gender, and ethnicity. There were three levels of the design: 1) the main effect of FI on attributions, 2) the main effect of cultural orientation and the interaction effect between cultural orientation and FI on attribution, and 3) the effect of the variables of age, gender, and ethnicity on the attribution process.

Fan Identification: Hypothesis 1

Significant differences were not found for hypothesis 1. Fan identification was not significantly related to attributions for either outcome of win or loss. An insignificant and positive correlation was found between FI and external attribution, $r = .13, p = .33$. A negative, yet insignificant, correlation was found between FI and internal attribution, $r = -.03, p = .83$. The self-serving bias was not confirmed as well. For illustrative purposes, Table 4 displays the mean scores for attributions for the different levels of FI.

Table 4.

Comparison of Mean Scores and Standard Deviations for Internal and External Attributions across Low FI (N = 8) and High FI (N = 35).

FI Level	Internal Attributions M (SD)	External Attributions M (SD)
Low	6.71 (1.11)	4.87 (.93)
High	6.58 (1.45)	5.21 (1.72)

Note. The 17 subjects who identified with moderate FI were not included in this table.

Collectivism: Hypothesis 2a and 2b

Hypothesis 2a was not confirmed in this study. Collectivism was not significantly related with external attributions, partial correlation $r = .00$, $p = .99$. Fans who identified with high levels of collectivism did not exhibit higher levels of external attributions. Moreover, external attributions were not significantly related to FI, nor were there significant differences between highly identified fans and low identified fans in the attribution process. External attributions were not significantly related to collectivism, nor was there a significant relationship to individualism.

Hypothesis 2b was not confirmed. The interaction of collectivism and FI did not significantly predict external attributions after controlling for age, gender, and ethnicity. Moreover, the interaction of collectivism and FI did not predict higher levels of external attributions compared to fans that identified lower levels of collectivism. Table 4 displays the model summary for the regression analysis for external attributions across wins. Table 5 displays the regression coefficients and the partial correlation coefficients for external attributions across wins. Table 6 displays the model summary for the regression analysis for external attributions across losses. Table 7 displays the regression coefficients and the partial correlation coefficients for external attributions across losses.

Table 5.

Model Summary for Hierarchical Regression for External Attributions Across Wins (N = 42).

Level	<i>R</i>	<i>R</i> ²	Adj. <i>R</i> ²	Std. Error of Estimate	Sum of Squares	<i>F</i>	Sig.
1	.10	.01	-.01	1.52	.96	.42	.52
2	.25	.06	-.01	1.52	5.77	.83	.49
3	.31	.10	-.06	1.55	9.20	.64	.70

Table 6.

Regression Coefficients and Partial Correlation Coefficients for External Attributions Across Wins (N = 42).

		Unstandardized Coefficients		Standardized Coefficient	Partial Correlations	
Level		<i>B</i>	Std. Error	Beta	<i>r</i>	<i>t</i>
1	<i>Constant</i>	4.77	.71		--	6.68**
	FI	.01	.02	.10	.10	.65
2	<i>Constant</i>	7.76	2.58		--	3.00
	FI	.02	.02	.16	-.06	.98
	COL Score	-.17	.45	-.06	-.06	-.37
	IND Score	-.44	.33	-.22	-.21	-1.32
	IND X FI	.00	.00	.04	.04	.23
	COL X FI	.00	.00	.05	.06	.32
3	<i>Constant</i>	8.70	2.88		--	3.03**
	FI	.02	.02	.15	.14	.84
	COL Score	-.40	.36	-.20	-.19	-1.12
	IND Score	-.30	.48	-.11	-.11	-.64
	IND X FI	.00	.00	.02	.02	.13
	COL X FI	.00	.00	.04	.04	.23
	Age	.03	.05	.11	.11	.65
	Gender	-.51	.50	-.17	-.17	-1.03
	White/Caucasian	.68	.81	.17	.15	.83
	Asian American	.09	.64	.03	.03	.14

Note. **Correlation is significant at the 0.01 level (2-tailed). IND is abbreviated for individualism. COL is abbreviated for collectivism.

Table 7.

Model Summary for Hierarchical Regression for External Attributions Across Losses (N = 18).

Level	<i>R</i>	<i>R</i> ²	Adj. <i>R</i> ²	Std. Error of Estimate	Sum of Squares	<i>F</i>	Sig.
1	.20	.04	-.02	2.03	2.72	.66	.43
2	.46	.21	.04	1.97	14.55	1.25	.33
3	.69	.47	.19	1.82	32.49	1.64	.23

Table 8.

Regression Coefficients and Partial Correlation Coefficients for External Attributions Across Losses (N = 18).

		Unstandardized Coefficients		Standardized Coefficients	Partial Correlations	
Level		<i>B</i>	Std. Error	Beta	<i>r</i>	<i>t</i>
1	<i>Constant</i>	3.76	1.58		--	2.39*
	FI	.03	.04	.20	.20	.81
2	<i>Constant</i>	-4.76	5.15		--	-.93
	FI	.01	.04	.06	-.02	.24
	COL Score	.02	.06	.29	.12	-1.18
	IND Score	.07	.07	.30	.41	1.22
	IND X FI	-.61	.59	-.31	-.29	-.13
	COL X FI	.47	.70	.23	.19	1.21
3	<i>Constant</i>	5.34	7.23		--	.74
	FI	-.01	.04	-.05	-.10	-.19
	COL Score	.08	.06	.49	.42	-.35
	IND Score	.03	.06	.14	.08	.54
	IND X FI	-.02	.62	-.01	-.01	-.05
	COL X FI	-1.03	.86	-.51	-.39	.44
	Age	-.04	.05	-.18	-.36	-.79
	Gender	-2.08	1.11	-.53	-.39	-1.87
	White/Caucasian	1.77	1.24	.43	.45	1.06
	Asian-American	2.34	1.63	.45	.45	1.11

Note. **Correlation is significant at the 0.01 level (2-tailed). IND is abbreviated for individualism. COL is abbreviated for collectivism.

Individualism: Hypothesis 3a and 3b

Significance was not found for hypothesis 3a. Significance was not found between individualism and external attribution, partial correlation $r = .09, p = .52$, nor was significance found between individualism and internal attribution, partial correlation $r = .02, p = .89$. Furthermore, a correlation matrix revealed that individualism did not significantly relate with external attributions in loss situations, partial correlation $r = .36, p = .16$, nor did it correlate with internal attributions in outcomes of wins, partial correlation $r = .07, p = .67$. Individualism did not predict higher levels of internal attributions, nor could the self-serving bias be confirmed. Table 8 displays the model summary for the regression analysis with internal attributions across wins. Table 9 displays the regression coefficients for internal attributions across wins. Table 10 displays the model summary for the regression analysis for internal attributions across losses. Table 11 displays the regression coefficients for internal attributions across losses.

Results showed insignificance for the self-serving bias for sports fans for hypothesis 3b. The interaction of individualism and FI did not show significance with external attributions in loss situations, nor was there significance with internal attributions in win situations after controlling for age, gender, and ethnicity. The level of individualism did not play a role in the attribution process of fans.

Contrary to the original hypothesis, the interaction of collectivism and FI showed a significant negative relationship with internal attributions across wins ($p < .05$). A line graph (Figure 1) illustrates the interaction effect of FI and collectivism for internal attributions across wins. To account for the small sample size, FI was dichotomized into two groups based on the SSIS Scale: low/moderate FI and high FI. Collectivism was

dichotomized through the median split into low and high groups at the cutoff score of 86.5. Figure 1 show that a unique dynamic occurs between the low/moderately identified fans and the highly identified fans as previously mentioned. The low/moderately-identified fans ($M = 7.8$, $SD = 1.43$) showed an increase in internal attributions at higher levels of collectivism increased compared to highly identified fans ($M = 6.4$, $SD = 1.62$). The highly identified fans maintained a relative constant level of internal attributions as the level of collectivism increased.

Age was negatively and significantly ($p < .05$) correlated with internal attributions for wins. That is, older fans were less likely to make internal attributions when their teams won. Fans in the age range of 18 to 21 years made more internal attributions ($M = 6.75$, $SD = 1.39$) than the fans in the age range of 22 and above ($M = 5.33$, $SD = .94$). Asian Americans also were negatively and significantly correlated with internal attributions ($p < .01$). As shown in Figure 2, Asian Americans demonstrated the lowest level of internal attributions when compared to other racial/ethnic groups.

Table 9.

Model Summary for Hierarchical Regression of Internal Attributions Across Wins (N = 42).

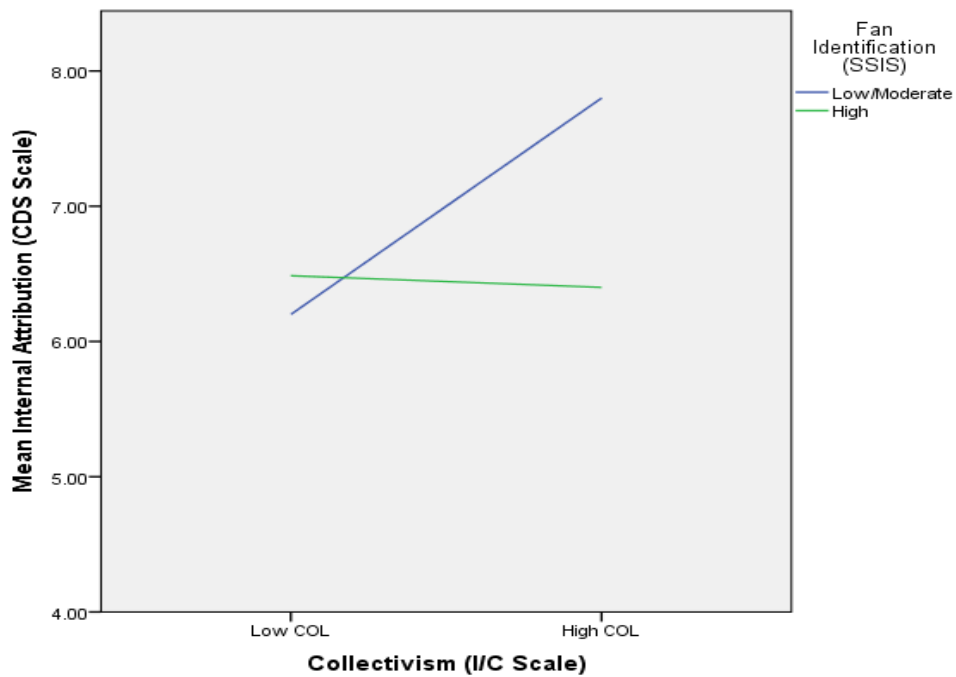
Level	<i>R</i>	<i>R</i> ²	Adj. <i>R</i> ²	Std. Error of Estimate	Sum of Squares	<i>F</i>	Sig.
1	.19	.04	.01	1.38	2.61	1.38	.25
2	.46	.21	.09	1.32	15.43	1.78	.14
3	.70	.49	.34	1.12	39.32	3.23	.01

Table 10.

Regression Coefficients and Partial Correlation Coefficients for Internal Attributions Across Wins (N = 42).

		Unstandardized Coefficients		Standardized Coefficient	Partial Correlations	
Level		<i>B</i>	Std. Error	Beta	<i>r</i>	<i>t</i>
1	<i>Constant</i>	7.38	.66		--	11.27**
	FI	-.02	.02	-.19	-.19	-1.17
2	<i>Constant</i>	1.27	7.71		--	.17
	FI	.04	.20	-.27	-.28	-1.67
	COL Score	.03	.02	.24	.26	1.55
	IND Score	.02	.03	.10	.10	.61
	IND X FI	.23	.24	.15	.16	.95
	COL X FI	-.41	.00	-.28	-.29	-1.80
3	<i>Constant</i>	2.47	6.87		--	.59
	FI	-.04	.02	-.42	-.46	-2.87
	COL Score	.12	.05	.19	.41	2.47
	IND Score	-.03	.07	.23	-.08	-.43
	IND X FI	.20	.21	.13	.17	.96
	COL X FI	-.40	.20	-.27	-.35	-2.05*
	Age	-.10	.04	-.35	-.43	-2.57*
	Gender	.20	.44	.07	.09	.47
	White/Caucasian	-.78	.56	-.22	-.25	-1.40
	Asian-American	-1.22	.44	-.42	-.46	-2.81**

Note. **Correlation is significant at .01 level (2-tailed). * Significance at 0.05 level (2-tailed). IND = individualism; COL = collectivism.



Note. FI was dichotomized into two levels based on the SSIS Scale: low/moderate and high. Collectivism was dichotomized into two levels based on the median split of the I/C Scale. The cut off score for collectivism was 86.5.

Figure 1. Line Graph of Interaction of FI and Collectivism Across Wins for Internal Attributions (N = 42).

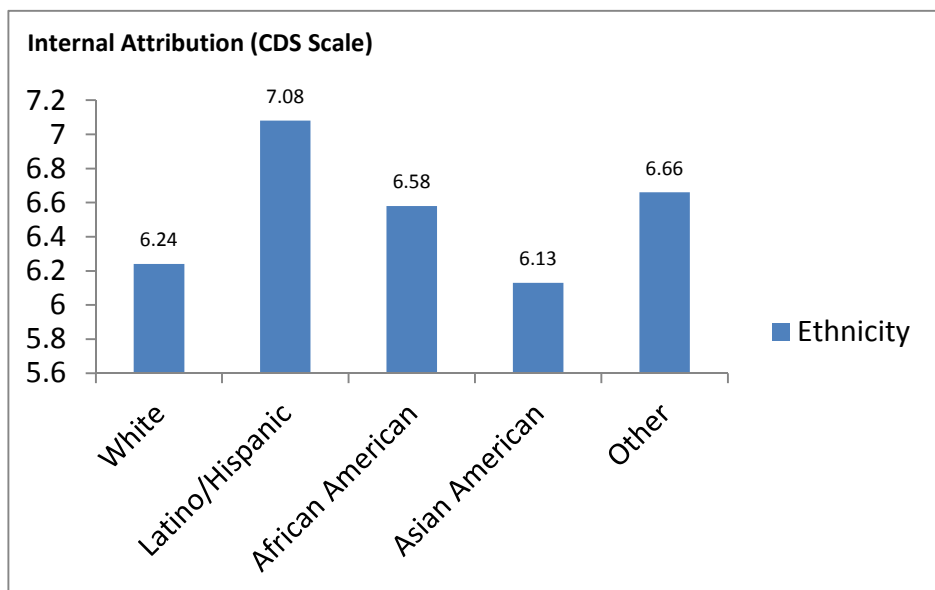


Figure 2. Bar Graph for Ethnicity Across Wins for Internal Attributions (N = 42).

Table 11.

Model Summary for Hierarchical Regression of Internal Attributions Across Losses (N = 18).

Level	<i>R</i>	<i>R</i> ²	Adj. <i>R</i> ²	Std. Error of Estimate	Sum of Squares	<i>F</i>	Sig.
1	.26	.07	.02	1.49	2.67	1.20	.29
2	.42	.18	-.17	1.62	6.81	.52	.76
3	.63	.40	-.29	1.71	15.16	.58	.78

Table 12.

Regression Coefficients and Partial Correlation Coefficients for Internal Attributions Across Losses (N = 18).

		Unstandardized Coefficients		Standardized Coefficient	Partial Correlation	
Level		<i>B</i>	Std. Error	Beta	<i>r</i>	<i>t</i>
1	<i>Constant</i>	5.53	1.16		--	4.78**
	FI	.03	.03	.26	.26	1.10
2	<i>Constant</i>	-8.76	18.86		--	-.46
	FI	.39	.40	.28	.27	.97
	COL Score	.17	.17	.29	.28	1.01
	IND Score	-.01	.20	-.15	-.14	-.05
	IND X SSIS	-.05	.47	-.03	-.03	-.10
	COL X SSIS	-.57	.56	-.38	-.28	-1.01
3	<i>Constant</i>	14.04	9.17		--	1.53
	FI	.03	.04	.23	.25	.72
	COL Score	.02	.06	.18	.13	.38
	IND Score	-.10	.08	-.55	-.40	-1.22
	IND X FI	.34	.59	.23	.20	.57
	COL X FI	-.94	.81	-.63	-.38	-1.16
	Age	-.05	.05	-.26	-.30	-.87
	Gender	-.92	1.31	-.31	-.24	-.70
	White/Caucasian	-1.09	1.17	-.35	-.39	-.93
	Asian-American	.93	1.54	.24	.21	.61

Note. **Correlation is significant at the 0.01 level (2-tailed). IND is abbreviated for individualism. COL is abbreviated for collectivism.

Ancillary Analysis

Analysis of the combined outcomes of wins and losses revealed the similar pattern of significance in the internal attributions when compared with the outcomes of wins. The pattern of negative relationships was found to be significant for internal attributions and the following: the interaction of collectivism and FI ($p < .05$), age ($p < .05$), and Asian-Americans ($p < .05$). At high levels of collectivism (86.5 and above), highly identified fans ($M = 6.57$, $SD = 1.46$) made less internal attributions when compared to low/moderately identified fans ($M = 7.22$, $SD = 1.91$). Age was a significant predictor in that older fans made less internal attributions than younger fans. Fans in the age range of 18 to 21 years ($M = 6.78$, $SD = 1.38$) made more internal attributions when compared to fans that were above 21 years of age ($M = 6.1$, $SD = 1.46$). The ethnic group, Asian Americans, made less internal attributions than other racial/ethnic groups as shown in Table 16. Tables 12-15 display the model summaries and regression coefficients for (external/internal) attributions across wins and losses.

Table 13.

Model Summary for Hierarchical Regression for External Attributions Across Wins and Losses (N = 60)

Level	<i>R</i>	<i>R</i> ²	Adj. <i>R</i> ²	Std. Error of Estimate	Sum of Squares	<i>F</i>	Sig.
1	.13	.02	.00	1.66	2.689	.97	.33
2	.23	.05	-.04	1.69	8.61	.60	.70
3	.36	.13	.01	1.67	21.35	.96	.48

Table 14.

Regression Coefficients and Partial Correlation Coefficients for External Attributions Across Wins and Losses (N = 60)

		Unstandardized Coefficients		Standardized Coefficient	Partial Correlations	
Level		<i>B</i>	Std. Error	Beta	<i>r</i>	<i>t</i>
1	<i>Constant</i>	4.52	.67		--	6.78**
	FI	.02	.02	.13	.13	.99
2	<i>Constant</i>	10.33	7.95		--	1.30
	FI	-.15	.20	-1.15	-.10	-.74
	COL Score	-.08	.06	-.61	-.18	-1.36
	IND Score	.02	.09	.10	.03	.22
	IND X FI	-.03	.25	-.02	-.02	-.13
	COL X FI	.30	.25	.17	.17	1.21
3	<i>Constant</i>	9.93	7.89		--	1.26
	FI	-.07	.20	-.56	-.05	-.36
	COL Score	-.05	.06	-.34	-.10	-.73
	IND Score	.01	.09	.06	.02	-.13
	IND X FI	-.01	.25	-.01	-.01	-.05
	COL X FI	.11	.25	.06	.06	.44
	Age	-.02	.03	-.08	-.09	-.62
	Gender	-.92	.45	-.29	-.28	-2.06
	White/Caucasian	.67	.63	.17	.15	1.06
	Asian-American	.63	.56	.17	.16	1.11

Note. **Correlation is significant at the 0.01 level (2-tailed). IND is abbreviated for individualism. COL is abbreviated for collectivism.

Table 15.

Model Summary for Hierarchical Regression for Internal Attributions Across Wins and Losses (N = 60)

Level	<i>R</i>	<i>R</i> ²	Adj. <i>R</i> ²	Std. Error of Estimate	Sum of Squares	<i>F</i>	Sig.
1	.03	.00	-.02	1.42	.10	.05	.83
2	.36	.13	.05	1.38	14.94	1.58	.18
3	.44	.19	.07	1.36	22.75	1.53	.17

Table 16.

Regression Coefficients and Partial Correlation Coefficients for Internal Attributions Across Wins and Losses (N = 60)

		Unstandardized Coefficients		Standardized Coefficient	Partial Correlations	
Level		B	Std. Error	Beta	r	t
1	<i>Constant</i>	6.75	.57		--	11.86**
	FI	.00	.01	-.03	-.03	-.22
2	<i>Constant</i>	-3.65	6.48		--	-.56
	FI	.21	.16	1.91	.17	1.29
	COL Score	.13	.05	1.18	.20	2.62
	IND Score	-.01	.08	-.06	-.02	-.14
	IND X FI	.02	.20	.02	.02	.12
	COL X FI	-.43	.20	-.29	-.29	-2.16*
3	<i>Constant</i>	-5.08	6.45		--	-.79
	FI	.27	.16	2.47	.23	1.65
	COL Score	.16	.05	1.34	.39	3.02
	IND Score	-.01	.08	-.03	-.01	-.07
	IND X FI	-.02	.19	-.12	-.01	.09
	COL X FI	-.41	.20	-.27	-.29	-2.61*
	Age	-.05	.03	-.25	-.26	-1.95*
	Gender	-.17	.37	-.06	-.07	-.47
	White/Caucasian	-.87	.49	-.26	-.25	-1.76
	Asian-American	-.88	.44	-.28	-.28	-2.01*

*Note.***Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed).

CHAPTER FOUR

DISCUSSION

Cultural research in sports fan behavior has not been sufficiently explored in the US population. This exploratory study investigated the effects of FI and cultural orientation on sport fans' attribution process in the US. The main hypotheses for this study were not supported in the statistical analyses. The first hypothesis regarding FI was not supported. The study did not confirm previous research that has shown that highly identified fans were likely to form more attributions when compared to lowly identified fans (Mann, 1974; Grove et al., 1991; Wann & Dolan, 1994; Wann & Grieve, 2005). In regards to the second and third hypotheses, it was representative of the inconsistent findings of the self-serving bias (Wann, 1995). Hypotheses 2 and 3 were not confirmed in that there were no significant relationship between collectivism and the attribution process, nor were there significance between individualism and the attribution process. Explanations are offered for the results as well as recommendations for future research.

Fan Identification

Fan identification did not play a significant role in the attribution process in this study. The level of FI did not play a significant role in the number of attributions made, nor were there significant differences found between highly identified fans and low identified in the internal or external attribution process, which may have been a result of the small sample size of FI (low FI = 8; high FI = 35). A significant positive correlation existed between FI and individualism. Fans that had higher levels of individualism were

likely to have higher levels of FI. Gau and Kim (2011) note that the level of FI and attitudes for sports teams are likely to differ for individualistic and collectivistic societies. The authors state that collectivistic societies (e.g. Korean and Taiwanese) emphasize the pursuit of knowledge (academic and personal success) more than recreational activities such as sports when compared to individualistic societies, which emphasize the pursuit of happiness. Thus, collectivistic societies may have less interest in sports and sports related activities than individualistic societies. This may have contributed to the significant positive correlation between FI and individualism.

Collectivism

The results of the study did not confirm the hypotheses related to collectivism. The study was not able to confirm collectivism having a significant relationship with external attributions, nor individualism having any significant relationship with the internal attribution process for the outcomes of wins and losses. Upon a closer examination of cultural orientation, the fans of this study identified with varying levels of both collectivism and individualism. For instance, some fans identified with similar levels of both collectivism and individualism, which may have led to insignificant findings. The fans of our study identify with diverse, multi-cultural values and backgrounds that are characteristic of the US (Triandis, 1988). The varying levels of collectivism and individualism may be indicative of the multicultural setting of the US. This may have played a role in the inconsistent findings of the attribution process.

Interestingly, a significant negative relationship was found for the interaction of collectivism and FI with internal attributions across wins. Highly identified fans with

high levels of collectivism made less internal attributions than low identified fans across wins. It may be that highly identified fans possess more knowledge of their team, and are able to take into account the various factors that impact the competition. Thus, they are able to modulate their internal attributions more so than low identified fans who typically have less knowledge of their team. Low identified fans may have been more likely to internalize the success of their team as they may be unaware of the other factors of the competition. In addition, collectivistic fans have the tendency to make less internal attributions than individualistic fans. These factors may have played a role in the internal attribution process of the collectivistic fans for this study.

Age showed a significant negative relationship in the internal attribution process after the wins. As the age of the fan increased, there was a decrease in the internal attributions. Triandis et al. (1994) note that individuals who are younger and more urbanized tend to reflect more achievement-oriented values related to competitiveness. Thus, older fans are able to understand the different aspects of their team and their performance, and attribute the team's performance to more external factors compared to younger fans. Furthermore, from a developmental standpoint, younger individuals are more likely to view the world and the environment in an egotistical viewpoint (Erikson, 1993). This may contribute to the younger fans' lack of knowledge and information of their team and competition and thus being susceptible to internalizing the success of their team.

Individualism

The results of this study did not confirm the hypotheses related to individualism.

Individualism showed no correlation with external attributions, nor was there a correlation with internal attributions in win situations. Significance was not found in the interaction of individualism and FI on external attributions in the loss outcomes, nor was there a positive correlation with internal attributions in win outcomes. The self-serving bias was not confirmed. Previous studies have shown that the self-serving bias is not always evident in sports fan behaviors (Wann et al., 2005). However, research has confirmed the effects of cultural orientation on the attribution process (Kashima & Triandis, 1986). This study was not able to confirm the self-serving bias or the cultural phenomenon due to the diverse characteristics of our participants and the various elements of our study. Ethnicity and environmental factors, which are outlined below, may have played a role in the results of this study.

Ethnicity and Cultural Orientation

Researchers note the heterogeneity of cultural orientation, and the unique characteristics of different ethnic group. A “consistent inconsistency” has been demonstrated in different ethnic groups in regards to the perceived causes of success and failure (Shuster et al., 1989). Variations have been documented in different ethnic groups (e.g., India and Hong Kong) in the self-serving bias. Cross-cultural variations in the attribution process have been extensively studied; however, cultural variations in sports fan behaviors in the US have not been adequately explored.

The ethnic group, Asian or Asian Americans, demonstrated the lowest level of internal attributions when compared to the other ethnicity groups across wins. Asians have been known to have Eastern philosophical values such as Confucianism and

collectivistic values, whereas people in America have been shown to have the highest level of individualism compared to other groups of people (Hoffstede, 2001; Gau & Kim, 2011). Asian Americans may differ from Asians in that they are instilled with collectivistic values but have been acculturated with westernized individualistic values. Asian Americans, as well as other groups, experience cultural and psychological changes in the acculturation process (Sam & Berry, 2010). Thus, based on their high contextual orientation, it is likely that Asian Americans will exhibit high levels of external attributions and low levels of internal attributions. This may have played a role in the attribution process for Asian Americans.

Significance was not found for the other ethnic groups for attribution process. It may be that, when comparing the scores of collectivism and individualism, all the ethnic groups exhibited higher levels of collectivism compared to individualism. Thus, ethnicity was an inaccurate predictor of cultural orientation as many studies have shown (Williams, 1996; Cooper & David; Triandis, 1988). Furthermore, Triandis (1988) notes that ethnicity or country of origin does not determine one's cultural orientation, but instead one's environment, social relationships, and background should be considered when trying to understand one's culture.

This sample was composed of a culturally diverse, heterogeneous population that is comparable to the current demographic trends of America, particularly of Southern California. According to the latest US census data (US Census Bureau, 2012), for the first time in US history, racial and ethnic minorities (REM) currently account for more than half the births in the US. Black, Hispanic, Asian and mixed-race births made up more than 50% of births in 2011. This trend suggests that the REMs in the US soon will

not be considered minorities, and further necessitates a more thorough and comprehensive evaluation in cultural diversity that is representative of the US.

This study consisted of a majority of racial ethnic minority students (47/60) at a small liberal arts, religiously oriented university. This study only measured the fundamental cultural values related to individualism and collectivism and did not account for the cultural and sub-cultural variations and backgrounds of the diverse groups (i.e., socioeconomic status, family structure, urbanization, industrialization, to name a few). This may have taken away the impact of cultural diversity and hidden the importance of the unique aspects of cultural orientation from the study. Furthermore, to accurately measure cultural orientation may take more precision and attention than originally thought.

Social and Environmental Factors

Social and environmental factors may have played a major role in the insignificant findings of the study as previous sports research have shown. For instance, research shows that the norms in the sport settings encourage fans to accept responsibility for the team's successes and failures (Wann & Dolan, 1994; Mark et. al., 1984). In order to conform to their social group, fans alter their views and behaviors to fit in with the group. Highly identified fans may adjust and regulate their emotional reaction to the team's poor performance in order to maintain appropriate social standing with the particular group. This may result in findings where fans may alter the attribution process to conform to the social setting they are part of.

Limitations

Limitations are noted in this study. The correlational design was used in this study, and the cause and effect relationship cannot be established. The subjects were recruited at a small, religiously oriented, liberal arts university which may not be generalizable to the broader population. This study did not account for the environmental factors that may have influenced the sports fan such as media influence, the socialization of fans, or other interactions that may have influence the fans' attribution making process. However, this has been noted in the majority of sports literature as an uncontrollable variable. This study does not have the advantage of examining sports fans' attributions in the field setting, which may reveal the immediate, visceral attribution processing that may more fully represent the subject.

Because of the lack of statistical power, there was an increased likelihood of Type II error. With a larger sample and an equal distribution of group size, the self-serving attribution bias might have reached significance in this study. This study was composed of a relatively modest number of winning fans ($N = 42$) and a small number of losing fans ($N = 18$). The unequal distribution of sample size may have contributed to the discrepant findings of the groups for wins/loss and FI. The larger sample size of the fans of the winning team showed significant findings whereas the fans that identified with loss did not have significant results. Moreover, there were 8 subjects who identified with low FI, and 35 subjects who identified with high FI. This most likely contributed to the lack of significance when comparing the groups of FI. Also, in regards to age, a majority of the subjects (37 out of 60) identified themselves in the age range of 18 to 21 years which was not representative of the general population. In regards to ethnicity, it may have been

useful to take precise analyses of ethnic background and cultural orientation. To specify the subtypes of ethnic backgrounds may have been more useful in the cultural examination. A few of the participants of the study commented on how some of the survey items were confusing. This may have posed difficulty in answering some items accurately.

Conclusion

Cultural studies that focus specifically on the sports fans in the US are lacking. This exploratory study seeks to expand upon the cultural studies in sports fans by examining the cultural differences in the US population. A vast number of sports fans studies explore variations by comparing fan behavior in different countries. However, in this researcher's knowledge, not one study was found which examines cultural orientation and sports fans behaviors in the US population. This study seeks to explore the role of cultural orientation and FI on the attribution process of the sports fans in the US. Even though inconclusive results were found, this study serves to provide a unique glimpse of the diverse population of the US. The unexpected findings in this study may warrant further cultural examination with a greater sensitivity to cultural diversity. Further research with a more representative sample size and a comprehensive evaluation of cultural orientation may provide insight into the role of cultural orientation and fans' attribution process in the US.

Future Direction

Attributional research in cultural studies in the US population is also lacking.

This exploratory study on sports fans' attribution process provides a glimpse of the cultural variations that exists in the US population. Future research may shed light into cultural diversity in the US and its impact on sports fans behaviors. By clarifying the unique differences and similarities of various cultures, it may help to understand the unique cultural values and beliefs that may help to explain the attribution process of sports fans in the US. Moreover, exploring cultural values and beliefs in an identified population may shed light into the impact of globalization and the technological advances of communication upon that group of people. This may help cultural researchers to understand the dynamics of acculturation and cultural assimilation in different people. Additional studies may explore sub-cultural variations in ethnic group and the different dimensions of the attribution process using a more comprehensive evaluation of cultural orientation. Specific demographic information of the sample may provide beneficial in examining culture such as education, family background, religion, socioeconomic level, to name a few. Further cultural studies in the sports setting may provide a glimpse into these unique dynamics of the different cultural backgrounds of sports fans in the US, and all across the world.

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APPENDIX A
DEMOGRAPHIC INFORMATION

Please provide some general information about yourself.

Age _____

Gender Male_____ Female_____

Which of the following best represents your ethnic background?

White or Caucasian _____

Latino or Hispanic _____

African American or Black _____

Asian _____

Pacific Islander or Native Hawaiian _____

Native American or Alaskan _____

Other _____

Please specify _____

Were you born in the United States? Yes_____ No_____

If no, indicate the year you immigrated to the United States. _____

What is your highest education level?

Completed High School _____

College _____

Completed College _____

Higher Education _____

What is your average household income per year (in dollars)?

0-10,000 _____

10,000-25,000 _____

25,000-50,000 _____

50,000-75,000 _____

75,000-above _____

What sports do you enjoy playing? List your favorite three sports.

1. _____

2. _____

3. _____

What sports do you enjoy watching? List your favorite three sports.

1. _____

2. _____

3. _____

What is your marital status?

____ Single _____ Widowed

____ Divorced or Separated _____ Married

What is your religious orientation/faith practice?

____ Christian (Catholic, Protestant) _____ Hindu

____ Muslim _____ Jewish

____ Buddhist _____ None

____ Other (please specify) _____

APPENDIX B

SSIS SCALE

Instructions: Please list your favorite team. _____

Please list your rival team. _____

Now answer each of the following questions with this team in mind by circling the most accurate number (i.e., response) to each item.

1. How important is it to you that the team listed above wins?

1 2 3 4 5 6 7 8
Not Important -----Very Important

2. How strongly do you see yourself as a fan of the team listed above?

1 2 3 4 5 6 7 8
Not at all a Fan-----Very Much a Fan

3. How strongly do you friends see you as a fan of the team listed above?

1 2 3 4 5 6 7 8
Not at All a Fan-----Very Much a Fan

4. During the season, how closely do you follow the team listed above via ANY of the following: in person or on television, on the radio, or televised news or a newspaper?

1 2 3 4 5 6 7 8
Never-----Almost Every Day

5. How important is being a fan of the team listed above to you?

1 2 3 4 5 6 7 8
Not Important-----Very Important

6. How much do you dislike the greatest rivals of the team listed above?

1 2 3 4 5 6 7 8
Do Not Dislike-----Dislike Very Much

7. How often do you display the above team's name or insignia at your place of work, where you live, or on your clothing?

1 2 3 4 5 6 7 8
Never-----Always

APPENDIX C

INDIVIDUALISM AND COLLECTIVISM SCALE

Please rate each of the following statements using the scale presented. (Likert Scale from 1 to 5)

- | | | | | | | | |
|-------------------|---|---|---|---|---|----------------|--|
| 1. | My happiness depends very much on the happiness of those around me. | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Strongly Disagree | | | | | | Strongly Agree | |
| 2. | Winning is everything. | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Strongly Disagree | | | | | | Strongly Agree | |
| 3. | I usually sacrifice my self-interest for the benefit of my group. | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Strongly Disagree | | | | | | Strongly Agree | |
| 4. | It annoys me when other people perform better than I do. | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Strongly Disagree | | | | | | Strongly Agree | |
| 5. | It is important for me to maintain harmony within my group. | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Strongly Disagree | | | | | | Strongly Agree | |
| 6. | It is important for me that I do my job better than others. | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Strongly Disagree | | | | | | Strongly Agree | |
| 7. | I like sharing little things with my neighbor. | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Strongly Disagree | | | | | | Strongly Agree | |
| 8. | I enjoy working in situations involving competition. | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Strongly Disagree | | | | | | Strongly Agree | |
| 9. | The wellbeing of my co-workers is important to me. | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Strongly Disagree | | | | | | Strongly Agree | |
| 10. | I often do my own thing. | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |

Strongly Disagree

Strongly Agree

11. If a relative were in financial difficulty, I would help within my means.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

12. Competition is the law of nature.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

13. If a co-worker gets a prize I would feel proud.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

14. Being a unique individual is important to me.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

15. To me, pleasure is spending time with others.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

16. When another student does better than I do, I get tense and aroused.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

17. Children should be taught to place duty before pleasure.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

18. Without competition it is not possible to have a good society.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

19. I feel good when I cooperate with others.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

20. Some people emphasize winning; I am not one of them.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

21. It is important that I respect decisions made by group.

1 2 3 4 5 6 7

Strongly Disagree

Strongly Agree

22. I depend on myself than others.
1 2 3 4 5 6 7
Strongly Disagree Strongly Agree
23. Family members should stick together, no matter what sacrifices are required.
1 2 3 4 5 6 7
Strongly Disagree Strongly Agree
24. I rely on myself most of the time; I rarely rely on others.
1 2 3 4 5 6 7
Strongly Disagree Strongly Agree
25. Parents and children must stay together, as much as possible.
1 2 3 4 5 6 7
Strongly Disagree Strongly Agree
26. My personal identity independent from others is very important to me.
1 2 3 4 5 6 7
Strongly Disagree Strongly Agree
27. It is my duty to take care of my family, even when I have to sacrifice what I want.
1 2 3 4 5 6 7
Strongly Disagree Strongly Agree
28. My personal identity is very important to me.
1 2 3 4 5 6 7
Strongly Disagree Strongly Agree
29. I am a unique person, separate from others.
1 2 3 4 5 6 7
Strongly Disagree Strongly Agree
30. I respect the majority's wishes in groups of which I am a member,
1 2 3 4 5 6 7
Strongly Disagree Strongly Agree
31. I enjoy being unique and different from others.
1 2 3 4 5 6 7
Strongly Disagree Strongly Agree
32. It is important to consult close friends and get their ideas before making a decision.
1 2 3 4 5 6 7
Strongly Disagree Strongly Agree

APPENDIX D

THE REVISED CAUSAL DIMENSION SCALE II (CDSII) FOR

THE SPORTS FANS

Instructions: Think about the reason or reasons you have written above. The items below concern your impressions or opinions of this cause or causes of your team's performance. Circle one number for each of the following scales.

Is the cause(s) something:

- | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. Reflects an aspect of your team
reflects an aspect of the competition | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 2. Manageable by your team
not manageable by your team | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 3. Permanent
temporary | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 4. Your team can regulate
your team cannot regulate | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 5. Over which others have control
over which others have no control | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 6. Inside of your team
outside of your team | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 7. Stable over time
variable over time | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 8. Under the power of other team
not under the power of other team | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 9. Something about you
something about the other team | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 10. Over which your team has power
over which your team has no power | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 11. Unchangeable
changeable | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| 12. Other team can regulate
other team cannot regulate | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

Note. The total scores for each dimension are obtained by summing the items, as follows:
1, 6, 9 = locus of causality; 5, 8, 12 = external control; 3, 7, 11 = stability; 2, 4, 10 = personal control.

APPENDIX E
A CROSS-CULTURAL EXAMINATION OF
ATTRIBUTIONS OF SPORTS FANS

Participant Information and Consent

You are being asked to participate in this research study to see what role culture plays in shaping how sports fans react to their team's outcome. It has been shown that an individual's cultural orientation influences the way the individual attributes to success or failure. We would like to learn the role culture and fan identification plays in the fans' reaction to their team's outcome. If you agree to participate in this study, you will answer a series of questions on the internet. It should take about 30-45 minutes to complete the survey. Questions that will be asked are your cultural orientation, how involved you are with your sports team, your thoughts on why and how your team lost or won, and questions about yourself such as age, gender, education, and others.

There will be at least 100 subjects in this study from major universities. Each subject will access the survey on the internet and complete the questions. The completion of the survey will conclude your involvement in the study. There is no risk or burden for participating in this study. The questions should not pose any difficulty or sensitivity to the participant. However, you may skip any question that you find difficult or uncomfortable to answer. And you always have the option not to participate. There are no benefits that you gain from this study. Your participation will help us to understand more about the cultural differences that may exist in sports fans. If you have any questions about the study, please feel free to call the principal investigator, Kendal Boyd, PhD, in the Department of Psychology or email at kboyd@llu.edu.

INFORMED CONSENT

By signing this consent form, I acknowledge that I have been properly informed of the nature of this research, the time involved for completion, and the benefits and risks of the study. I have received both verbal and written information. I have been given the opportunity to ask questions, and they have been answered to my satisfaction. My signature below confirms that I have been given a copy of this form and a copy of the California Experimental Subjects' Bill of Rights for my records.

Subject's Name

Subject's Signature

Date

Witness